



# DATA SHEET

## UF1600CT~UF1608CT

### ULTRAFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 800 Volts **CURRENT** 16 Amperes

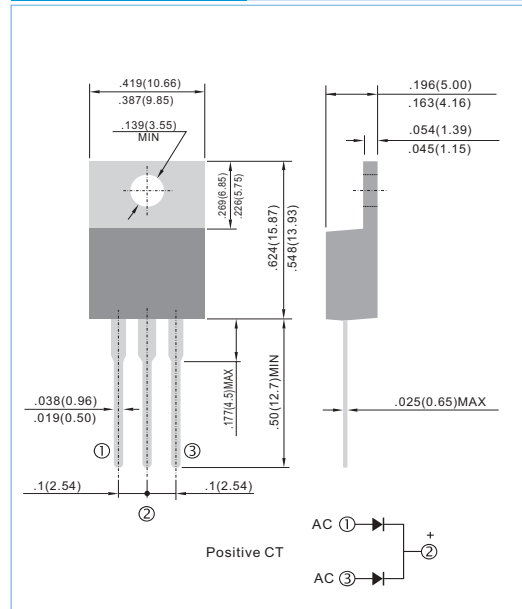
TO-220AB Unit : inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Ultra fast recovery times, high voltage.
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: TO-220AB full molded plastic package  
Terminals: Lead solderable per MIL-STD-202, Method 208  
Polarity: As marked.  
Standard packaging: Any  
Weight: 0.08 ounces, 2.24grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

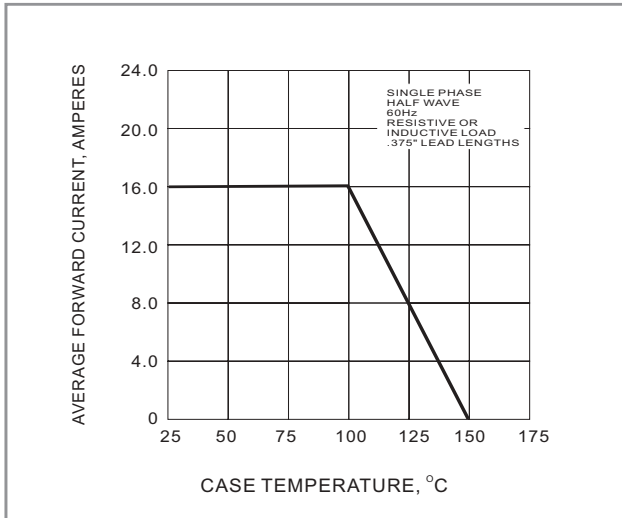
PARAMETER	SYMBOL	UF1600CT	UF1601CT	UF1602CT	UF1603CT	UF1604CT	UF1606CT	UF1608CT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	V
Maximum Average Forward Current .375"(9.5mm) lead length at T <sub>c</sub> = 100°C	I <sub>AV</sub>	16							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	125							A
Maximum Forward Voltage at 8.0A	V <sub>F</sub>	1.0			1.30		1.70		V
Maximum DC Reverse Current T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =125°C	I <sub>R</sub>	10 500							uA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	170					130		pF
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	50					100		ns
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	2							°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 TO +150							°C

#### NOTES:

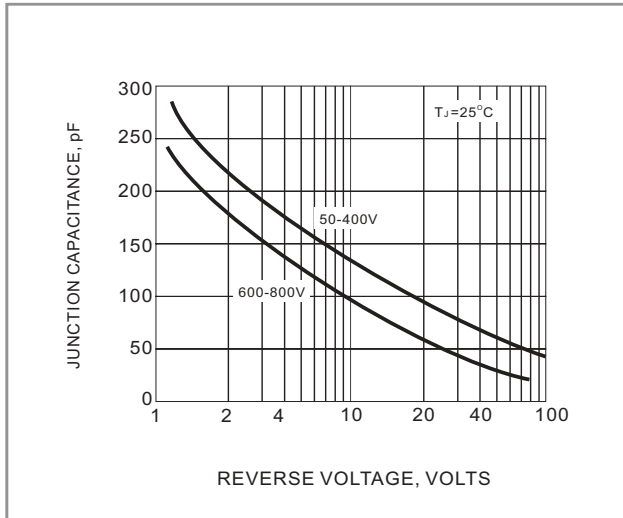
- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A.
- Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted.



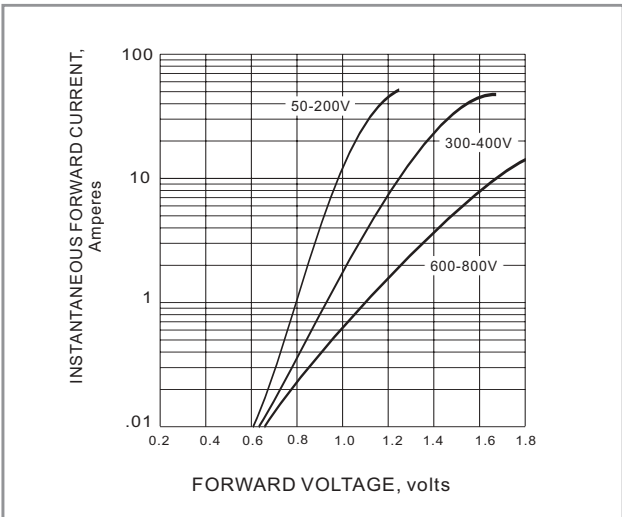
**RATING AND CHARACTERISTIC CURVES**



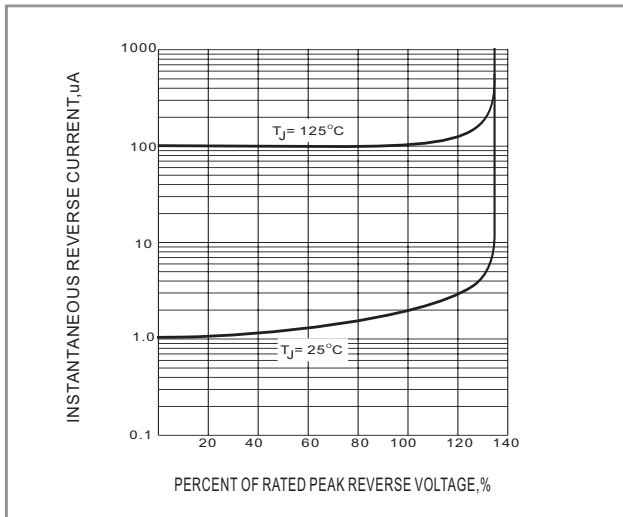
**Fig.1 FORWARD CURRENT DERATING CURVE**



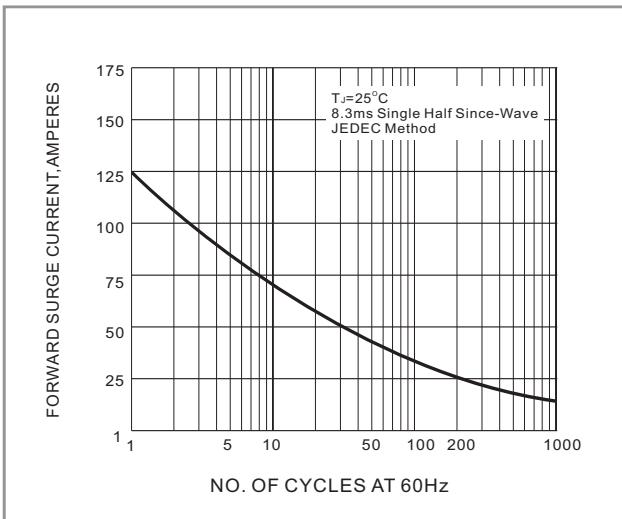
**Fig.2 TYPICAL JUNCTION CAPACITANCES**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 PEAK FORWARD SURGE CURRENT**